



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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December 17, 2003

CERTIFIED RETURN RECEIPT

7099 3400 0016 8896 3182

Anthony Christofferson
H.E. Davis Construction
525 West Arrowhead Trail
P.O. Box 488
Spanish Fork, Utah 84639

Re: Third Review of "Amended" Notice of Intention to Combine Mining Operations, H.E. Davis Construction, Levan Chicken Creek Mines, M/023/016, Juab County, Utah

Dear Mr. Christofferson:

The Division has completed a third review of your Amended Notice of Intention to Commence Large Mining Operations for the Levan Chicken Creek mine complex, located in Juab County, Utah. The latest written information was received October 3, 2003 and the revised maps on October 20, 2003.

After reviewing the latest supplemental information, we still find a number of the deficiencies remain. A significant amount of the previously requested information was not provided as outlined in the attached review document. Since continued operations at the Chicken Creek (East) mine are currently suspended, and restrictions have been placed on the Levan Chicken Creek (West) mine, another meeting in our office may expedite the review process and help us finalize tentative approval of the permit application.

Our **bolded** comments to your latest response are listed below under the applicable Minerals Rule heading. Our previous technical review comments are also shown in italics. Please provide a response to the **bolded** comments within the timeframe as outlined in the enclosed Division Directive.

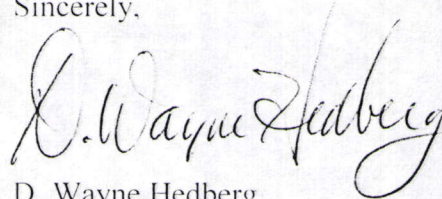
Please provide replacement pages to the original notice using redline and strikeout text, so we can see what changes have been made. After the notice is determined complete

Page 2 of 2
Anthony Christofferson
M/023/016
December 17, 2003

and technically acceptable, we will ask that you send us two copies of the complete plan. Upon finalization of the permit review process, we will return one copy stamped "approved" for your records.

We will suspend further review of the Levan Chicken Creek mine notice until we receive your technical response to this letter. If you have any questions regarding this letter or the attached review comments, please contact me, or Tom Munson at (801) 538-5286 and 538-5321, respectively. We look forward to completing this permitting action in a timely manner. Thank you for your cooperation in this regard.

Sincerely,

A handwritten signature in cursive script that reads "D. Wayne Hedberg". The signature is written in dark ink and is positioned above the printed name and title.

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment: Review
cc: Kay Christofferson, H.E. Davis Const.
O:\M023-Juab\m02300164-Levan\Gypsum\draft\initialrev-amend-06172003.doc

THIRD REVIEW OF AMENDED NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

H.E. Davis Construction
Levan Chicken Creek Mine
December 17, 2003
M/023/016

R647-4-105 - Maps, Drawings & Photographs

105.1 Topographic base map, boundaries & pre-activity disturbance.

New maps have been received as a part of the latest submission; however, many of the maps are not numbered. Maps should be numbered for use in referrals in the text of the plan. There are two drawings labeled East and West which have no number or label. (DJ+TM)

A reclamation treatments map should be included in the application showing areas of the site to receive various reclamation treatments. A map key should be included that identifies the areas that are shaded, cross-hatched or color-coded reflecting where specific reclamation treatments will be applied. Areas would include: proposed drainage improvements or reconstruction, sediment control structures, & safety berms. (DJ)

The surface facilities map (Drg. # II D-1) should be of sufficient scale to clearly depict each component presently in place at the lower crushing and staging (boneyard) area. The facilities are presently shown much too small to be legible. We suggest that an enlarged map of at least 1"=100' or smaller scale be used for this area. (DJ)

Drawing II D-3 does not show all of Chicken Creek East, this map should be enlarged in the area of both mines and made into two maps to better show detail and any drainage controls for Chicken Creek East and West. (TM)

There is currently no drawing that shows drainage controls for Chicken (East), both offsite and on-site. The Drawing Labeled Levan Chicken (East) could be used to show this drainage information, including watershed boundaries. The drawing labeled Levan Chicken Creek (West) can be used to show watershed boundaries off site and on-site. (TM)

105.3 *Drawings or Cross Sections (slopes, roads, pads, etc.)*

Identify all water sources that could be potentially impacted by mining related activities (springs, stream, and the pipelines).

Based on onsite inspections and conversations with the local mayor of Levan, several culinary springs, irrigation controls, and pipelines were identified within

close proximity to the mine. These resources need to be shown on a map of an appropriate scale to show proximity to the mine and the permit area.

This information was provided on a map in the plan to address this issue. One map was included in the plan, but it is not of a scale that is readable. Adequate identification of town springs or pipelines has not been provided. This information needs to be included as a part of the permit application. (TM)

Drawing #II D-2 which was included in the plan was not correctly labeled and drawn. It is necessary to correct this map and clearly show the location of the springs. The location of Cobble Rock spring is not correctly shown on this drawing. From personal communications with the Levan City Mayor, this spring is located about 5 miles up the canyon, well above the Chicken Creek (east) mine site. (TM)

More detail is needed on the catch basins, pipes and sediment trap locations along the Plaster Mill road and both mine sites. Exactly how will they be installed? In addition, there are labels on the watershed map for the West site that reference pipe and ditch to pond, where is the pipe? (TM)

The trucking of gypsum from the Levan -Steele Mine and Chicken Creek Mine has come under scrutiny because of safety issues (the county road is a one lane road). Concerns were also raised regarding the potential impacts to the high pressure culinary water pipelines, which are buried under the road, from the large haul trucks that travel between the two sites. The operator has agreed to work with the County to develop a plan to upgrade and improve the existing canyon road, or to move the truck traffic to the north side of the canyon and upgrade the old Plaster Mill access road (per contractual agreements with the land owners). All information regarding plans for road upgrades in Chicken Creek Canyon must be submitted to the Division and included as part of the LMO permit application.

The new plan failed to provide design or reclamation plans for the road to be reconstructed on the North side of the Canyon. The location and route of this road and all culvert locations and other environmental concerns will need to be addressed prior to permit approval. The sediment controls for the existing properties will also need to be in place and functioning before any mining takes place. (TM)

R647-4-106 - Operation Plan

106.5 *Plan for protecting & redepositing soils*

The Mt. Nebo report on the soil resources at the site indicates that a majority of the mine is located in the Xeric Torriorthents soil horizon with an average depth of 10 to 40 inches. The table in Section 106.6 says 21,500 cubic yards of soil has been stockpiled and that “76,8709” cubic yards of soil is to be stockpiled. The Division assumes this last figure is a typographical error and has also assumed that the correct figure should be 76,870 cubic yards. Based on this total volume, 98,370 cubic yards of soil has been or will be salvaged. This is enough to cover the 60-acre area one foot deep. In at least five places (pages III-8, VII-6, and VIII-1), the application indicates five or six inches of soil will be applied. This discrepancy needs to be resolved or explained. One foot of soil over broken rock or ripped surfaces (page VII-6) should be adequate for vegetation to become established. (PBB & DJ)

R647-4-107 - Operation Practices

107.1 *Public safety & welfare*

107.1.14 *Posting warning signs*

Signs warning that mining is taking place at the sites, a sign at the mouth of the canyon, on the county warning of the haul truck traffic, and a sign describing the standard blasting protocol at the site, should also be posted. (DJ)

This comment was not addressed in the latest submittal. (DJ)

107.1.15 *Constructing berms, fences, etc. above highwalls*

Berms constructed above the highwalls, to prevent access, should be a minimum of three (3) feet high. (DJ)

This comment should be acknowledged in the text of the application. (DJ)

107.3 *Erosion control & sediment control*

Sediment and erosion control is not adequately addressed in the current mine plan or on the ground. The operation is required to have adequate sediment control for all mining-related disturbances. Based upon recent onsite inspections, it was apparent that sediment was leaving the site untreated and entering Chicken Creek from the lower portions of the access roads leading into the mine site. The operator must provide plans for adequate sediment controls to address this problem.

The plan states that a new pond will be installed to treat drainage from the road accessing the site. This pond is found on Drawing II D-1. The drawing does not adequately show how the water will get to this pond. It is obvious that these ponds will have to have ditches conveying drainage to the ponds. Please provide the location of these conveyance ditches and their cross-sections.

This was not provided. Please provide this information. (TM)

It was mentioned on Page VI-1 of the plan that water/runoff will enter the stream drainage at the bottom of the Canyon. A UPDES permit is normally required for any point source discharge leaving a mine site, sediment laden or otherwise. Please file an application with and obtain the appropriate permit(s) from the Department of Environmental Quality, Division of Water Quality.

This was not provided. Please provide this information. (TM)

It was obvious during our last site inspection that the grading of these ditches is going to be crucial to their success in getting the sediment laden surface water to these ponds. The ditch going to the main pond was not properly graded to take all the water from the disturbance. Please supply a watershed map showing what area both ponds will treat. This is necessary to verify the effectiveness of these controls.

What prevents offsite, undisturbed area surface water runoff from coming onsite from the watersheds above the pad? It has been stated that berms to direct the flow of water will be used. If they are in place as stated, they need to be identified and placed on a map, identifying direction of flow and size of berm, etc. It is stated that all drainage will go to the sediment ponds, but this does not presently occur on site. The sediment controls that are in place do not function as described, therefore an on-site maintenance plan will be required in the plan to insure that these controls are in place and function as intended. (TM)

Sediment laden drainage is able to leave the site from the road leaving the site. A ditch needs to be designed to treat this small amount of runoff. The road slopes to the west/inside of the road and a small sediment trap could be installed before it discharges onto the County Road. (TM)

The water leaving the lower processing area exit road still can flow into the adjacent stream channel. The ditch and sediment structure built to control storm runoff from this area does not appear to function as originally intended. A berm at the bottom of the road adjacent to the creek needs to be

part of the plan to prevent sediment-laden water from entering the creek. The ditch that carries water to the existing sediment pond located east of the access road leading up to the lower processing pad area does not function as intended either. It does not appear to capture and control all of the undisturbed drainage. These designs need to be improved and included in the plan. (TM)

Please address these issues and supply the appropriate engineering drawings to update the plan. (TM)

The operation also needs to address sediment control measures related to the county road, since the grading activities on this road can potentially contribute a significant source of sediment to the creek related to the mining operation.

Sediment traps and controls were not in place along the county road and at the base of the access road to the Levan property as described in the plan. The sediment laden water still exits the disturbed area untreated, crosses the road and into the creek. Runoff still comes off the county road and enters the creek untreated. Therefore, we request that an onsite maintenance plan and a detailed map showing the exact location of these structures and their size be included in the plan. Please provide an accurate and detailed map and engineering design details for all sediment control structures including dimensions. (TM)

107.4 *Deleterious material safety stored or removed*

The containment placed around the fuel tanks should be sized to contain 110% of the maximum amount of storage of the fuel tanks. (DJ)

This comment was not addressed in the latest submittal. Please provide a written response and commitment to address this containment requirement as part of the plan. (DJ)

R647-4-109 - Impact Assessment

109.1 *Impacts to surface & groundwater systems*

Baseline information on the quantity and quality of the water associated with these springs should be included as part of the application (any historical, seasonal flow and water quality information would be useful).

This comment was not adequately addressed. The information is still requested. If this water monitoring and quality data has not been collected

by the city, then it will be necessary to install some form of monitoring equipment on the pipelines.

In order to understand the potential impacts to the springs, baseline water quality and quantity data will need to be included in the plan and an ongoing water monitoring plan will need to be formulated and coordinated with the city. (TM)

An assessment of the projected impacts to the surface and groundwater resources is also required. The operator should state how these resources will or will not be impacted by the mining operation, and what measures will be implemented to mitigate any potential impacts. Erosion and sediment control measures must be addressed if mining related impacts are anticipated that may affect the surface water resources (i.e., Chicken Creek). It is also important that the assessment include the potential blasting impacts to these resources. The site specific blasting protocol and any proposed monitoring or mitigation provisions should also be outlined so that no adverse impacts will be realized to the water resources.

The operator's latest response included an opinion of what the potential impacts to the culinary springs might be. We believe that the potential impacts cannot be confirmed without a detailed geologic assessment by a registered geo-hydrologist. Your current response is considered a professional opinion that is not supported by any data. Therefore, the Division requests a plan of how these springs will be monitored in conjunction with the city and what will constitute acceptable mitigation, also working with the city, should blasting be shown to disrupt these springs. (TM)

The actual blasting protocol as discussed with Mr. Childs in a previous Division meeting was not provided. A statement was included on how no impacts would occur to the springs, based upon distance to the springs and the rock type. This response is not considered adequate, since no scientific evidence was supplied to support this statement.

A blasting protocol, i.e. amount and type of explosive, drill hole spacing, number of drill holes in each blast pattern and the shock wave analysis will be necessary prior to approval of the plan. The Division does not have any data to document blasting impacts, but has received verbal statements from adjacent land owners that these blasts have been felt a significant distance away from the mine. (TM)

Section 106.9 of the plan states that no water will be discharged from this site. However, this section also implies that once the water has settled in the ponds, it will be allowed to leave the site. Please clarify which of these two statements are correct. (DJ)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

The placement of 5" of soil over solid rock on the highwall benches, without any surface preparation, will not provide sufficient growth depth to support revegetation. A consideration of some type of preparation of the bench surfaces should be considered before the soils are applied. (DJ)

This comment was not addressed in the latest submission. Please address this request. (DJ)

R647-4-111 - Reclamation Practices

111.2 Reclamation of natural channels

The plan states, "Whenever drainage is disturbed, the new channel will be lined with a good graduation of angular, hard 6"-24" rip-rap to engineered guidelines." Because channel reconstruction will need to be included in the reclamation surety, an estimate of the amount of drainage that will be disturbed over the life of this permit should be made. A copy of this engineering standard for this construction should be included in this plan. (DJ)

An estimate of the total drainage disturbance has been included in the plan. A total of 200' of drainage will be reconstructed during reclamation. Please indicate on the facility map or reclamation treatments map, the location of this drainage reconstruction. (DJ)

111.3 Erosion & sediment control

More information is needed regarding the erosion and sediment control practices for the proposed haul road on the north side of the canyon. The sediment trap design was shown in a generic manner and supposedly will be employed during the operational phase. The information that is still lacking is what construction methods will be used to prevent sediment and road construction debris from entering the stream during construction of the road. (TM)

111.8 All roads & pads reclaimed

Any haul road construction relating to ore haulage from the Chicken Creek Mine will need to be included in the reclamation plan and bonded for reclamation. (DJ)
The reclamation surety indicates that a total of 6.38 acres of pit access roads (a change from 7.73 acres in the initial application) will be used. Please indicate on the facilities map which roads shown on this map will be reclaimed. This should include roads to and from both mine site areas. (DJ)

The surety also indicates 10,177' of sidecast road to be reclaimed. Please show the location of this road(s) on the reclamation treatments or facilities map. (DJ)

113.0 Surety

The surety submitted indicates:

2 ea Signs & safety gates to be removed.

The application indicates a total of four signs and the Division has suggested at least two additional (blasting protocol and heavy truck warning) signs be erected. Additional signs are suggested in areas below the mine on the county road warning of heavy truck traffic. (DJ)

42.85 acres to have manure applied and seeded.
This leaves a total of 17.98 acres that will not receive reclamation treatments.

Please indicate on the reclamation treatments map the location of the areas that will not be reclaimed. (DJ)

The surety indicates a total of 4 acres of waste dump tops to be ripped.

Please show the location of these dump areas on either the reclamation treatments or the facilities map. (DJ)

The initial permit application indicated that a total of 60.83 acres would receive amendments and be seeded. The second submittal indicates only 42.85 acres will receive these treatments, will the 17.98 acres removed from acres to be reclaimed, receive any type of reclamation treatments? (DJ)

A total of 2450 lf of safety berm was indicated in the initial permit application, the second submittal reduced this number to 1700 lf. Were the areas requiring safety berms reduced in the second submittal? (DJ)

The cost to reclaim sediment ponds should be included in the surety estimate. (DJ)

Activities including ripping pit floors, ripping pit access roads, ripping and regrading access roads, topsoil replacements- trackhoe-dozers and topsoil-trucks have all been reduced. Sufficient changes in the second submission were not noted that would warrant these changes. Please clarify and justify these reductions. (DJ)

Equipment mobilization is presently calculated at \$2000/piece of equipment mobilized. (DJ)

The escalator for the 5 year escalation is 2.89% not 3.13 as shown. (DJ)